

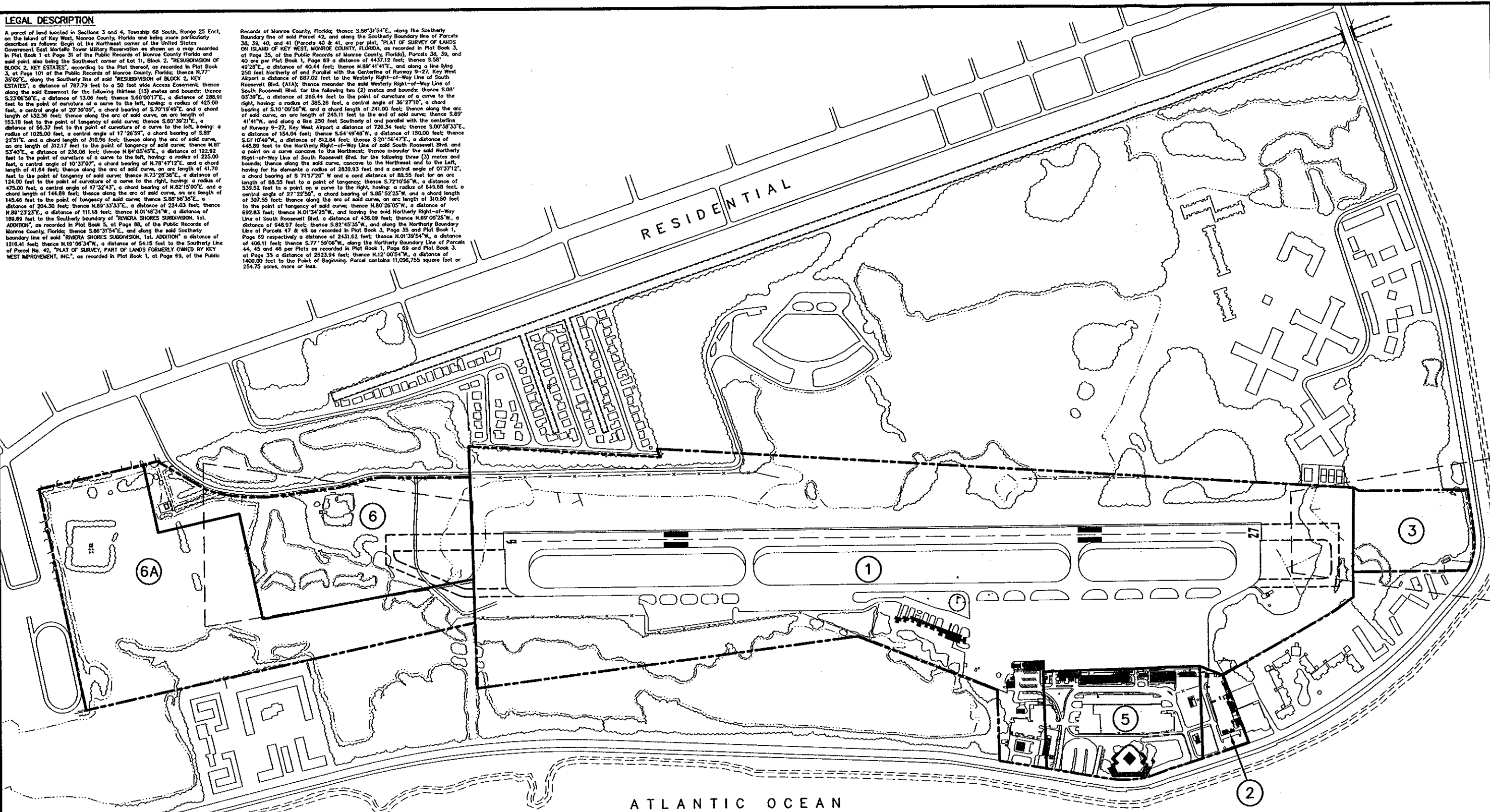
6.6 AIRPORT PROPERTY MAP

The airport property map, depicted in Figure 6.6, indicates how and when the various parcels that comprise the airport were acquired. The first transfer of airport property to Monroe County occurred in 1952. Additional parcels were acquired in 1974, 1990, and 2000. No further land acquisition is proposed as part of the master plan update.

LEGAL DESCRIPTION

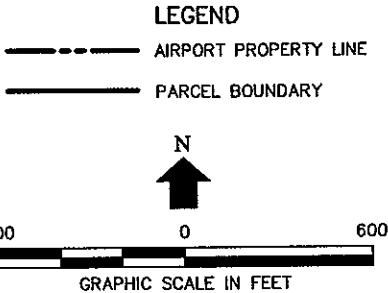
A parcel of land located in Sections 3 and 4, Township 68 South, Range 25 East, on the island of Key West, Monroe County, Florida and being more particularly described as follows: Begin at the Northwest corner of the United States Government East Morrell Tower Military Reservation as shown on a map recorded in Plat Book 1 at Page 31 of the Public Records of Monroe County, Florida and said point also being the Southwest corner of Lot 11, Block 2, "RESUBDIVISION OF BLOCK 2, KEY ESTATES", according to the Plat thereof, as recorded in Plat Book 3, at Page 101 of the Public Records of Monroe County, Florida; thence N.77°35'02"E, along the Southerly line of said "RESUBDIVISION OF BLOCK 2, KEY ESTATES", a distance of 787.79 feet to a 50 foot wide Access Easement; thence along the said Easement for the following thirteen (13) miles and bounds; thence S.23°05'58"E, a distance of 13.06 feet; thence S.60°00'17"E, a distance of 288.91 feet to the point of curvature of a curve to the left, having a radius of 425.00 feet, a central angle of 29°39'05", a chord bearing of S.70°19'49"E, and a chord length of 152.36 feet; thence along the arc of said curve, an arc length of 153.18 feet to the point of tangency of said curve; thence S.60°39'21"E, a distance of 56.37 feet to the point of curvature of a curve to the left, having a radius of 1025.00 feet, a central angle of 17°26'59", a chord bearing of S.89°27'51"E, and a chord length of 310.96 feet; thence along the arc of said curve, an arc length of 312.17 feet to the point of tangency of said curve; thence N.81°53'40"E, a distance of 236.06 feet; thence N.84°05'45"E, a distance of 122.92 feet to the point of curvature of a curve to the left, having a radius of 235.00 feet, a central angle of 10°37'07", a chord bearing of N.78°47'12"E, and a chord length of 41.64 feet; thence along the arc of said curve, an arc length of 41.70 feet to the point of tangency of said curve; thence N.73°28'38"E, a distance of 124.00 feet to the point of curvature of a curve to the right, having a radius of 475.00 feet, a central angle of 17°32'43", a chord bearing of N.62°15'00"E, and a chord length of 144.89 feet; thence along the arc of said curve, an arc length of 145.46 feet to the point of tangency of said curve; thence S.89°38'30"E, a distance of 204.30 feet; thence N.89°33'33"E, a distance of 224.03 feet; thence N.89°23'23"E, a distance of 111.18 feet; thence N.01°46'34"W, a distance of 189.89 feet to the Southerly boundary of "RIVERA SHORES SUBDIVISION, 1st ADDITION", as recorded in Plat Book 5, at Page 88, of the Public Records of Monroe County, Florida; thence S.86°31'54"E, and along the said Southerly boundary line of said "RIVERA SHORES SUBDIVISION, 1st ADDITION" a distance of 1216.41 feet; thence N.19°06'34"W, a distance of 54.15 feet to the Southerly line of Parcel No. 42, "PLAT OF SURVEY, PART OF LANDS FORMERLY OWNED BY KEY WEST IMPROVEMENT, INC.", as recorded in Plat Book 1, at Page 69, of the Public

Records of Monroe County, Florida; thence S.86°31'54"E, along the Southerly Boundary line of said Parcel 42, and along the Southerly Boundary line of Parcels 38, 39, 40, and 41 (Parcels 40 & 41, are per plat, "PLAT OF SURVEY OF LANDS ON ISLAND OF KEY WEST, MONROE COUNTY, FLORIDA, as recorded in Plat Book 3, at Page 35, of the Public Records of Monroe County, Florida); Parcels 38, 39, and 40 are per Plat Book 1, Page 69 a distance of 4437.12 feet; thence S.58°49'28"E, a distance of 40.44 feet; thence N.89°41'41"E, and along a line lying 250 feet Northerly of and Parallel with the Centerline of Runway 9-27, Key West Airport a distance of 687.02 feet to the Westerly Right-of-Way Line of South Roosevelt Blvd. (A1A); thence meander the said Westerly Right-of-Way Line of South Roosevelt Blvd. for the following two (2) miles and bounds; thence S.88°03'39"E, a distance of 265.44 feet to the point of curvature of a curve to the right, having a radius of 385.26 feet, a central angle of 36°27'10", a chord bearing of S.10°09'58"W, and a chord length of 241.00 feet; thence along the arc of said curve, an arc length of 245.11 feet to the end of said curve; thence S.89°41'41"W, and along a line 250 feet Southerly of and parallel with the centerline of Runway 9-27, Key West Airport a distance of 726.34 feet; thence S.00°38'33"E, a distance of 154.04 feet; thence S.54°49'48"W, a distance of 150.00 feet; thence S.61°04'08"W, a distance of 812.84 feet; thence S.20°54'47"E, a distance of 448.89 feet to the Northerly Right-of-Way Line of said South Roosevelt Blvd. and a point on a curve concave to the Northwest; thence meander the said Northerly Right-of-Way Line of South Roosevelt Blvd. for the following three (3) miles and bounds; thence along the said curve, concave to the Northwest and to the Left, having for its elements a radius of 2839.93 feet and a central angle of 01°37'12", a chord bearing of S.71°17'20"W and a chord distance of 88.55 feet for an arc length of 88.55 feet to a point of tangency; thence S.72°10'56"W, a distance of 539.52 feet to a point on a curve to the right, having a radius of 649.68 feet, a central angle of 27°22'59", a chord bearing of S.85°52'25"W, and a chord length of 307.55 feet; thence along the arc of said curve, an arc length of 310.50 feet to the point of tangency of said curve; thence N.80°26'05"W, a distance of 692.83 feet; thence N.01°34'25"W, and leaving the said Northerly Right-of-Way Line of South Roosevelt Blvd. a distance of 436.09 feet; thence N.89°09'25"W, a distance of 545.97 feet; thence S.87°45'55"W, and along the Northerly Boundary Line of Parcels 47 & 48 as recorded in Plat Book 3, Page 35 and Plat Book 1, Page 69 respectively a distance of 2431.62 feet; thence N.01°39'54"W, a distance of 406.11 feet; thence S.77°59'06"W, along the Northerly Boundary Line of Parcels 44, 45 and 46 per Plats as recorded in Plat Book 1, Page 69 and Plat Book 3, at Page 35 a distance of 2523.94 feet; thence N.12°00'54"W, a distance of 1400.00 feet to the Point of Beginning. Parcel contains 11,096,755 square feet or 254.75 acres, more or less.



PROPERTY ACQUISITION LEGEND				
PARCEL NUMBER	ACRES	TYPE OF ACQUISITION	DATE ACQUIRED	HOW ACQUIRED
1	159.68	FEE	1952	SURPLUS PROPERTY
2	2.51	FEE	1952	SURPLUS PROPERTY
3	8.55	FEE	1980	VIA WILL
5	14.75	FEE	1952	SURPLUS PROPERTY
6A	26.48	FEE	2000	SURPLUS PROPERTY
6B	42.78	FEE	1974	SURPLUS PROPERTY

NOTE: PARCEL 4 IS NOT CONTIGUOUS WITH OTHER PARCELS.



AIRPORT PROPERTY MAP



Key West
International Airport
Master Plan Update

FIGURE:
6.6

SECTION 7
PROJECT IDENTIFICATION,
STAGING AND COST ESTIMATES

7.1 INTRODUCTION

This section identifies the capital improvement projects that comprise the development plans presented in the preceding section. Projects were identified on the basis of safety, capacity shortfalls, as well as airport management and tenant priorities. In certain cases, alternate projects have been identified as a way of meeting capacity shortfalls. The ultimate implementation of projects will be decided on the basis of funding availability, environmental approvals, and management and tenant priorities.

This section provides conceptual cost estimates for all projects in 2003 dollars. Cost estimates are divided into construction costs and program costs. Construction costs include all physical items and the labor associated with their installation. Unit prices used to develop the construction costs account for the higher prices typically incurred in the Key West market. Program costs include change order contingency, project management, construction management, design services during construction, and design fees. Details of the cost estimates are provided in Appendix F.

Phasing of projects was accomplished on the basis of existing and projected demand for facilities, anticipated timelines for environmental approvals, consultation with airport management, and tenant priorities. Although projects have been assigned to short-term and intermediate-term periods, project phasing can be altered to meet funding limitations. Phasing for this master plan has been established as follows: short-term (2003 through 2007) and intermediate-term (2008 through 2012) and long-term (2013 through 2021). None of the proposed projects are scheduled for the long-term.

7.2 SHORT-TERM PROJECTS

Project priorities during the short-term period include continuing environmental studies to support the construction of a standard runway safety area and runway extension, the construction of terminal area projects, and the continuation of the ongoing sound insulation program. These projects are described below and are illustrated in Figure 7.1. Estimated costs for these projects are shown in Table 7.1.

With respect to terminal area projects, it should be noted that there are two options. The first option is to construct a new passenger terminal. The second option is to construct a modest, short-term terminal expansion that would provide some level of relief to the passenger congestion that occurs in the existing terminal.

TABLE 7.1
SHORT-TERM (2003 TO 2007)
PROJECT COST ESTIMATES
Key West International Airport
Master Plan Update

Project Reference Number for Figure 7.1	Project	Estimated Construction Cost (2003 Dollars)	Estimated Program Costs (2003 Dollars)	Estimated Total Cost (2003 Dollars)
1	Prepare EIS	NA	\$1,000,000	\$1,000,000
2	Aircraft Wash Rack ¹	\$150,000	\$40,000	\$190,000
3	GA Hangar Project ¹	\$1,530,000	\$380,000	\$1,910,000
4	FBO Parking ¹	\$160,000	\$40,000	\$200,000
5	Signage Program	\$110,000	\$40,000	\$150,000
6	Terminal Study	NA	\$60,000	\$60,000
7	Terminal Expansion	\$4,290,000	\$1,070,000	\$5,360,000
8	FBO Access Road	\$310,000	\$70,000	\$380,000
9	New Terminal	\$23,810,000	\$5,950,000	\$29,760,000
10	NIP - Phase 3	\$2,500,000	\$1,000,000	\$3,500,000
11	NIP - Phase 4	\$2,500,000	\$1,000,000	\$3,500,000
12	NIP - Phase 5	\$2,500,000	\$1,000,000	\$3,500,000
13	NIP - Phase 6	\$2,500,000	\$1,000,000	\$3,500,000
Short-term Costs Assuming Terminal Expansion				
	Cost to Monroe County	\$14,400,000	\$6,110,000	\$20,510,000
	Cost to Third Party	\$1,840,000	\$460,000	\$2,300,000
Short-term Costs Assuming New Passenger Terminal				
	Cost to Monroe County	\$33,650,000	\$10,512,900	\$44,162,900
	Cost to Third Party	\$1,840,000	\$460,000	\$2,300,000

Source: URS Corporation, 2003.

Notes: ¹ These projects to be financed by a combination of third party funding.

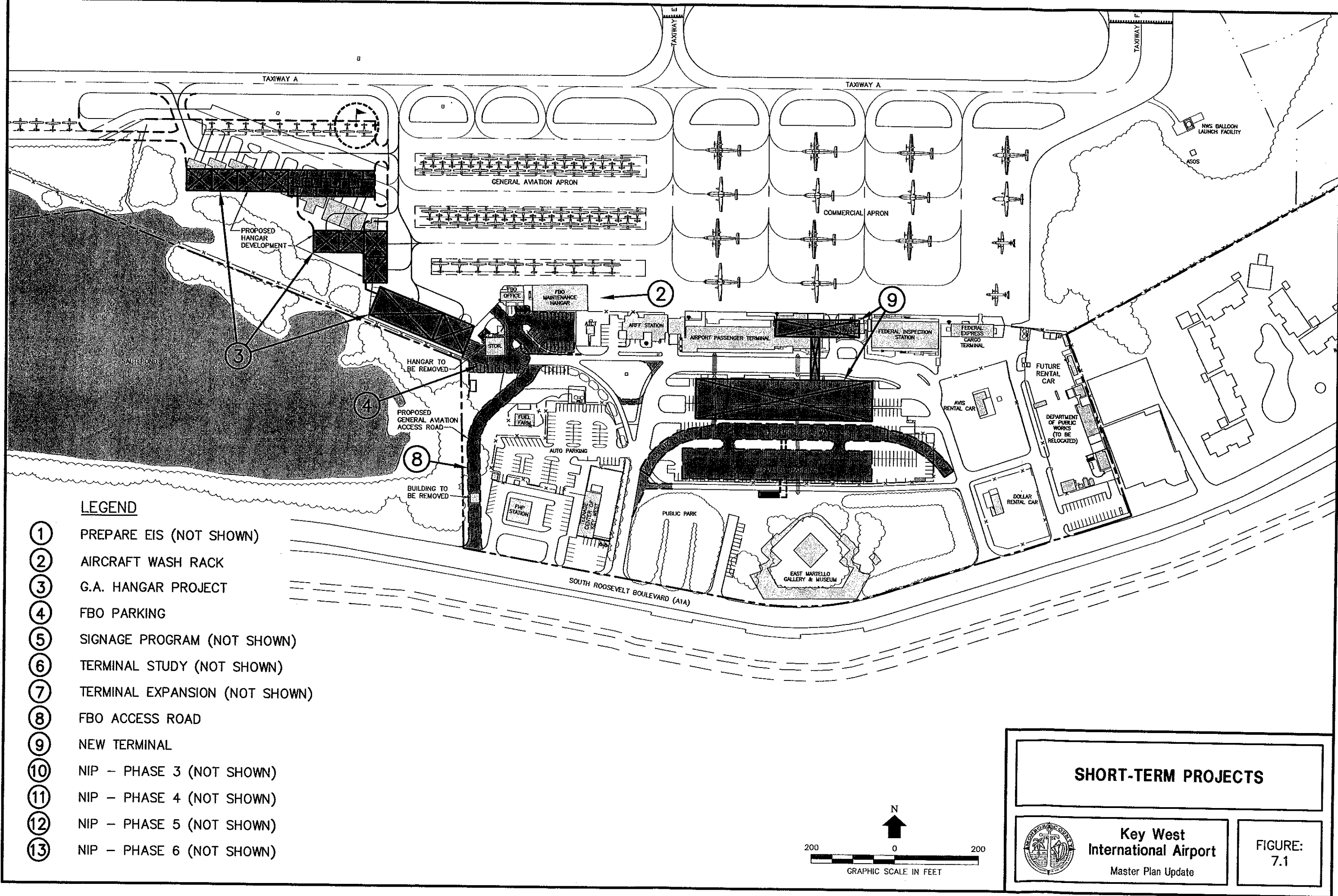
7.2.1 PREPARE ENVIRONMENTAL IMPACT STATEMENT (EIS)

As noted in Section 6, a feasibility study is being conducted to examine issues related to certain environmental impacts associated with the proposed construction of a standard runway safety area and runway extensions. Environmental issues being examined include impacts to wetlands, mangroves and salt ponds, as well as historic resources. On the basis of the information obtained from the feasibility study, the FAA will decide whether safety and financial considerations justify proceeding with an EIS for these projects. If a determination is made to proceed with an EIS, this project will consist of preparing such a study.

7.2.2 CONSTRUCT AIRCRAFT WASH RACK

The airport does not currently have any facility for the collection of wastewater from washing of aircraft. This project consists of the construction of a designated area east of the FBO hangar for

J:\KEY WEST MASTER PLAN UPDATE\EXHIBITS\PG 7.1.DWG 03/12/03 11:25



washing aircraft. The facility would consist of a properly marked, graded and paved area that would collect wastewater resulting from washing of aircraft. The facility would provide water supply and would also contain an oil/water separator for proper disposal of oils. This project would be funded by a combination of third party sources.

7.2.3 GENERAL AVIATION HANGAR PROJECT

This project consists of the demolition of 10 existing aircraft hangars and the construction of 20 new hangars. The new hangars will consist of 12 individual hangars and 8 nested T-hangars. This project also includes the construction of a paved apron that will accommodate approximately 10 aircraft tie-downs. The construction of this apron will require the relocation of a lighted wind cone and segmented circle to a site on the north side of the runway. This project would be funded by a combination of third party sources.

7.2.4 FBO PARKING REHABILITATION AND EXPANSION

This project consists of the realignment of the entrance roadway to the general aviation aircraft apron, the removal of one hangar and two storage buildings, and the rehabilitation and expansion of the FBO automobile parking lot. This project will enable the general aviation hangar project to construct hangars adjacent to the existing entrance road. This project would be funded by a combination of third party sources.

7.2.5 CONDUCT ROADWAY SIGNAGE PLAN AND PROGRAM

Roadway signage at the airport is currently a confusing mixture of styles and colors. Furthermore, there is no apparent hierarchy to the signs and the placement of many signs is confusing. This project consists of the preparation of a comprehensive signage plan that would address the issues of hierarchy, style, color, and placement. Following the preparation and approval of a signage plan, the signs specified by the plan would be installed.

7.2.6 TERMINAL AREA STUDY / PRELIMINARY DESIGN

This project consists of further analysis and definition of new passenger terminal facilities in order to finalize a concept that could proceed to design. The study will examine the potential to modify certain terminal elements, and/or the timing of elements, recommended by the preferred alternative in order to meet funding constraints.

7.2.7 SHORT-TERM PASSENGER TERMINAL EXPANSION

This project consists of the construction of a terminal expansion of approximately 8,000 square feet between the existing passenger terminal and the FIS building. This project would include

the demolition of the existing terminal annex. This project would only be pursued if sufficient funding could not be secured for the construction of a new passenger terminal.

7.2.8 NEW FBO ACCESS ROAD

This project consists of the construction of a new FBO access road. The new road would be located west of the Florida State Highway Patrol building and would provide a connection from South Roosevelt Boulevard to the fuel farm, general aviation facilities, the air traffic control tower, and the Aircraft Rescue and Fire Fighting Station. This project is required only if a new passenger terminal is constructed.

7.2.9 NEW PASSENGER TERMINAL

This project consists of the construction of an approximately 50,000-square-foot terminal with an elevated access road and elevated parking structure in the area currently occupied by automobile parking. A concourse facility would extend over Faraldo Circle and would extend to the current edge of aircraft parking apron. The existing passenger terminal would remain in operation until such time the new terminal became operational and would then be demolished.

7.2.10 Noise Insulation Program – Phase 3

This project consists of installing sound insulation in 53 residences in the Riviera Shores subdivision along Venetian Drive, Jamaica Drive, and Bahama Drive. These residences fall within the 65 DNL noise contour as identified by the airport's Part 150 Study. Phase 1 of the noise insulation program has been completed and Phase 2 is scheduled for completion in 2003.

7.2.11 NOISE INSULATION PROGRAM – PHASE 4

This project consists of installing sound insulation in 53 residences in the vicinity of 4th Street and 5th Street between Flagler Avenue and Juanita Lane. These residences are located within the airport's 65 DNL noise contour and have been identified as being eligible for sound insulation as part of the airport's Part 150 Study.

7.2.12 NOISE INSULATION PROGRAM – PHASE 5

This project consists of installing sound insulation in 65 residences in the vicinity of 2nd Street and 3rd Street near Flagler Avenue. These residences are located within the airport's 65 DNL noise contour and have been identified as being eligible for sound insulation as part of the airport's Part 150 Study.

7.2.13 NOISE INSULATION PROGRAM – PHASE 6

This project consists of installing sound insulation in 55 residences in the vicinity of 11th Street and Riviera Drive. These residences are located within the airport's 65 DNL noise contour and have been identified as being eligible for sound insulation as part of the airport's Part 150 Study.

7.3 INTERMEDIATE-TERM PROJECTS

Projects included in the intermediate-term focus on implementation of airfield improvements. It is anticipated that the EIS and associated environmental approvals would take a number of years to obtain. Therefore, assuming that the necessary environmental approvals are obtained, the construction of airfield projects would likely occur in the intermediate-term period. These projects are described below and are illustrated in Figure 7.2. Estimated costs for these projects are shown in Table 7.2.

TABLE 7.2
INTERMEDIATE-TERM (2008 TO 2012)
PROJECT COST ESTIMATES
Key West International Airport
Master Plan Update

Project Reference Number (Figure 7.2)	Project	Estimated Construction Cost in 2003 Dollars	Estimated Program Cost in 2003 Dollars	Estimated Total Cost in 2003 Dollars
1	Runway Safety Area	\$7,920,000	\$1,980,000	\$9,900,000
2	Runway Extension	\$2,600,000	\$650,000	\$3,250,000
3	NIP- Phase 7	\$2,500,000	\$1,000,000	\$3,500,000
Intermediate-Term Cost Totals		\$13,020,000	\$3,630,000	\$16,650,000

Source: URS Corporation, 2003.

7.3.1 CONSTRUCT RUNWAY SAFETY AREA

This project entails the construction of a safety area around Runway 9/27 that meets FAA criteria for runways serving C-III aircraft such as the CRJ-700. The project would consist of filling ponds, removing vegetation, and grading land around the runway to meet the FAA's clearance and grading requirements. The proposed runway safety area would have a width of 500 feet and a length that extends 1,000 feet past the Runway 9 threshold and 1,250 feet past the Runway 27 threshold.

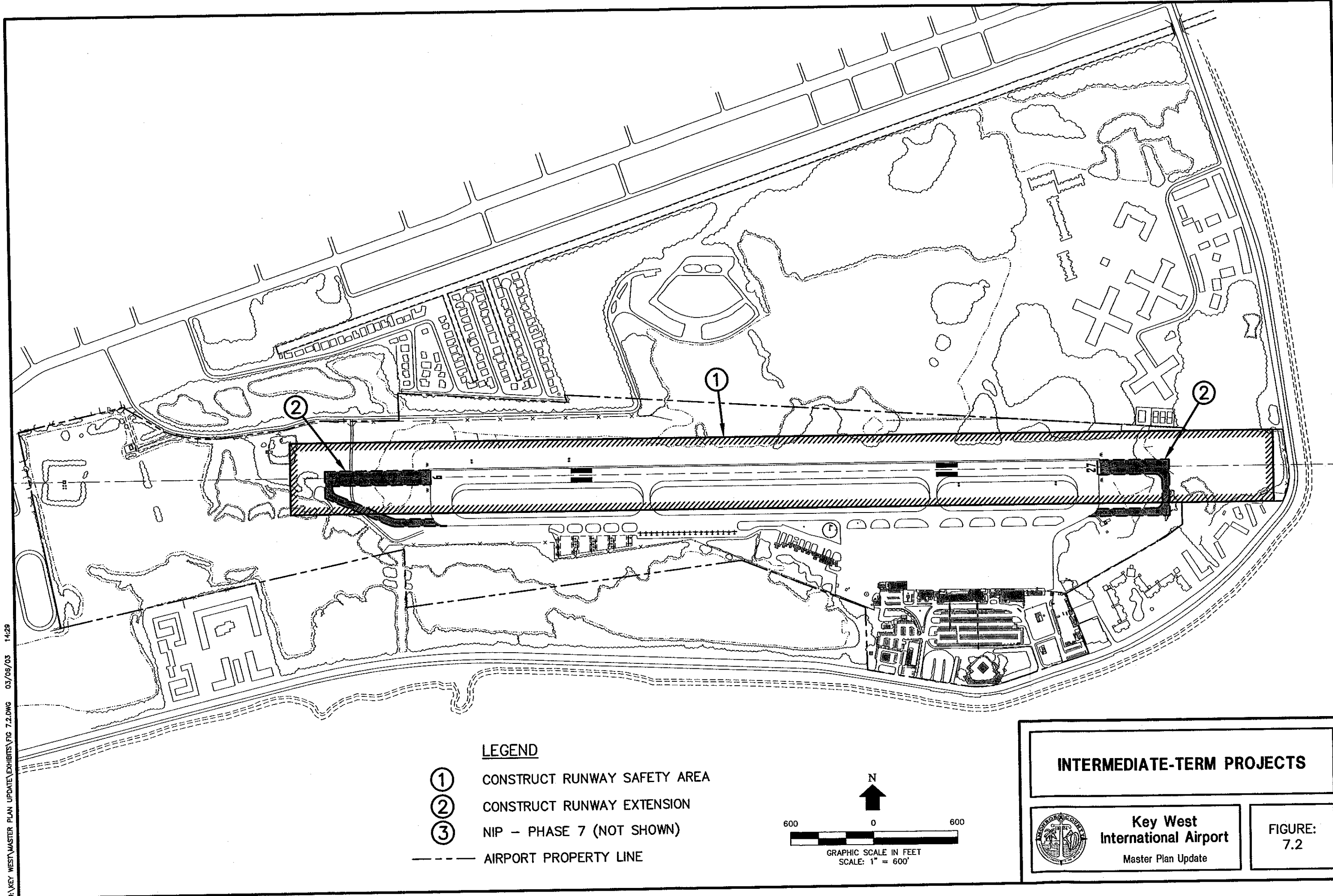
7.3.2 CONSTRUCT RUNWAY EXTENSION

This project consists of extending the runway by 750 feet on its west-end and by 500 feet on its east-end. The project includes paving for the runway extensions, associated taxiways and blast pads, lighting, signage and marking.

7.3.3 NOISE INSULATION PROGRAM –PHASE 7

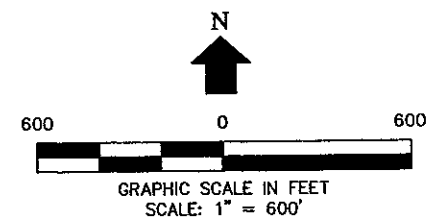
This project consists of installing sound insulation in 42 residences in the vicinity of Linda Avenue and Government Road. These residences were identified as being eligible for sound insulation as part of the airport's Part 150 Study.

J:\KEY WEST\MASTER PLAN UPDATE\EXHIBITS\FIG 7.2.DWG 03/06/03 14:29



LEGEND

- ① CONSTRUCT RUNWAY SAFETY AREA
- ② CONSTRUCT RUNWAY EXTENSION
- ③ NIP - PHASE 7 (NOT SHOWN)
- AIRPORT PROPERTY LINE



INTERMEDIATE-TERM PROJECTS



**Key West
International Airport**
Master Plan Update

**FIGURE:
7.2**

APPENDIX A
WEIGHTED HOURLY CAPACITY

The methodology described in FAA Advisory Circular 150/5060-5 "Airport Capacity and Delay" was used to calculate the weighted hourly capacity and Annual Service Volume (ASV) of the airfield at EYW.

The weighted hourly capacity was derived by utilizing the following equation:

$$C_w = \frac{(P_1 * C_1 * W_1) + (P_2 * C_2 * W_2)}{(P_1 * W_1) + (P_2 * W_2)}$$

C_w = Weighted hourly capacity

P = Runway use configuration in percent (VFR and IFR)

C = Unadjusted hourly capacity

W = ASV weighting factor

$$C_w = \frac{(.992 * 65 * 1) + (.008 * 51 * 8)}{(.992 * 1) + (.008 * 8)}$$

$$C_w = \frac{64.48 + 3.26}{.992 + .064}$$

$$C_w = \frac{67.74}{1.056}$$

$$C_w = 64.15 \text{ (64)}$$

Once the weighted hourly capacity is determined, the following equation is used to derive the airfield's ASV:

$$ASV = C_w * D * H$$

C_w = Weighted hourly capacity

D = Daily demand ratio (annual demand divided by average daily demand during peak month)

H = Hourly demand ratio (average daily demand divided by average peak hour demand during peak month)

$$D = \frac{92.591}{295} = 314$$

$$H = \frac{294}{36} = 8.25$$

$$ASV = 64 * 314 * 8.25 = 165,792$$

APPENDIX B
RUNWAY LENGTH ANALYSIS

TAKEOFF RUNWAY LENGTH ADJUSTMENT

(Given takeoff distance at sea level, mean max temperature, elevation & difference in Hi / Lo pts)

Altitude Correction

(7% per 1,000' above sea level)

E = Elevation

L = Takeoff distance @ sea level

L1 = Takeoff runway length corrected for altitude

$$L1 = (.07 * E / 1000) * L + L$$

Temperature Correction

(0.5% per degree above std temp in hottest month)

(Std Temp adjusted to Sea Level)

T1 = Adjusted Std Temp

T = Mean Max High Temperature

L2 = Takeoff RW length corrected for altitude & temperature

$$T1 = 59 - (3.566 * E / 1000)$$

$$L2 = (.005 * (T - T1)) * L1 + L1$$

Effective Gradient Correction

(10' for each 1' difference between
Hi/Lo Pts.)

G = Difference between Hi / Lo point in feet

L3 = RW length corrected for altitude, temperature & gradient

$$L3 = G * 10 + L2$$

Aircraft - **Citation X**

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit

1. Enter the takeoff distance at sea level in feet
from Table 1.

L =

Altitude

2. Enter Airport Altitude in feet above sea level

E =

L1 =

Temperature

3. Enter Mean Max Daily Temp in degrees F

T =

T1 =

L2 =

Gradient Adjustment

4. Enter Maximum Difference in RW Elevation in feet

Takeoff Runway Length Adjusted for Temp, Elevation & Gradient

L3 =

Takeoff Runway Length @ 60 percent useful load (L3 X 80%) =

4,730

Note: The takeoff runway length calculated here is based on the airplane takeoff distance.
If the accelerate-stop distance is greater than the takeoff distance, the runway length
should be designed for the accelerate-stop distance. Consult the aircraft flight manual.

TAKEOFF RUNWAY LENGTH ADJUSTMENT

(Given takeoff distance at sea level, mean max temperature, elevation & difference in Hi / Lo pts)

Altitude Correction

(7% per 1,000' above sea level)

E = Elevation

L = Takeoff distance @ sea level

L1 = Takeoff runway length corrected for altitude

$$L1 = (.07 * E / 1000) * L + L$$

Temperature Correction

(0.5% per degree above std temp in hottest month)

(Std Temp adjusted to Sea Level)

T1 = Adjusted Std Temp

T = Mean Max High Temperature

L2 = Takeoff RW length corrected for altitude & temperature

$$T1 = 59 - (3.566 * E / 1000)$$

$$L2 = (.005 * (T - T1)) * L1 + L1$$

Effective Gradient Correction

(10' for each 1' difference between Hi/Lo Pts.)

G = Difference between Hi / Lo point in feet

L3 = RW length corrected for altitude, temperature & gradient

$$L3 = G * 10 + L2$$

Aircraft -

Learjet 60

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit

1. Enter the takeoff distance at sea level in feet from Table 1.

L = 5360

Altitude

2. Enter Airport Altitude in feet above sea level

E = 3

Temperature

3. Enter Mean Max Daily Temp in degrees F

T = 89

T1 = 58.99

L2 = 6166

Gradient Adjustment

4. Enter Maximum Difference in RW Elevation in feet

1

Takeoff Runway Length Adjusted for Temp, Elevation & Gradient

L3 = 6176

Takeoff Runway Length @ 60 percent useful load (L3 X 80%) =

4,940

Note: The takeoff runway length calculated here is based on the airplane takeoff distance. If the accelerate-stop distance is greater than the takeoff distance, the runway length should be designed for the accelerate-stop distance. Consult the aircraft flight manual.

TAKEOFF RUNWAY LENGTH ADJUSTMENT

(Given takeoff distance at sea level, mean max temperature, elevation & difference in Hi / Lo pts)

Altitude Correction

(7% per 1,000' above sea level)

E = Elevation

L = Takeoff distance @ sea level

L1 = Takeoff runway length corrected for altitude

$$L1 = (.07 * E / 1000) * L + L$$

Temperature Correction

(0.5% per degree above stdn temp in hottest month)

(Std Temp adjusted to Sea Level)

T1 = Adjusted Std Temp

T = Mean Max High Temperature

L2 = Takeoff RW length corrected for altitude & temperature

$$T1 = 59 - (3.566 * E / 1000)$$

$$L2 = (.005 * (T - T1)) * L1 + L1$$

Effective Gradient Correction

(10' for each 1% difference between
Hi/Lo Pts.)

G = Difference between Hi / Lo point in feet

L3 = RW length corrected for altitude, temperature & gradient

$$L3 = G * 10 + L2$$

Aircraft - **Gulfstream IV**

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit

1. Enter the takeoff distance at sea level in feet
from Table 1

L =

Altitude

2. Enter Airport Altitude in feet above sea level

E =

Temperature

3. Enter Mean Max Daily Temp in degrees F

L1 =

T =

T1 =

L2 =

Gradient Adjustment

4. Enter Maximum Difference in RW Elevation in feet

Takeoff Runway Length Adjusted for Temp, Elevation & Gradient

L3 =

Takeoff Runway Length @ 60 percent useful load (L3 X 80%) =

5,015

Note: The takeoff runway length calculated here is based on the airplane takeoff distance.
If the accelerate-stop distance is greater than the takeoff distance, the runway length
should be designed for the accelerate-stop distance. Consult the aircraft flight manual.

&a8L -- KEYW - EYW --

TAKEOFF PERFORMANCE

-- KEYW - EYW

ELEVATION 3

CANADAIR REGIONAL JET
CF34-3B1 ENG

KEY WEST, FL
KEY WEST INTL

* APU ON *

*** APR ARMED ***

TAKEOFF FLAPS 20.0 DEGREES

ENGINE BLEED CLOSED

RUNWAY		09	27	
LENGTH		5801	5801	CLIMB
SLOPE		0.00	0.00	LIMIT
TMP	N1-BLD			
DEG C	CLSD/OPEN		LIMIT WEIGHT / V1	
-20	84.7/ 84.6	53783/140	53783/140	60000.
-15	85.5/ 85.4	53341/139	53341/139	60000.
-10	86.3/ 86.2	52909/138	52909/138	60000.
-5	87.1/ 87.0	52477/138	52477/138	60000.
0	87.9/ 87.8	52045/137	52045/137	60000.
2	88.2/ 88.1	51874/137	51874/137	60000.
4	88.5/ 88.4	51703/137	51703/137	60000.
6	88.8/ 88.7	51532/136	51532/136	60000.
8	89.1/ 89.0	51362/136	51362/136	60000.
10	89.5/ 89.4	51190/136	51190/136	60000.
12	89.8/ 89.7	51019/136	51019/136	60000.
14	90.1/ 90.0	50848/135	50848/135	60000.
16	90.4/ 90.3	50677/135	50677/135	60000.
18	90.7/ 90.6	50506/135	50506/135	60000.
20	91.1/ 90.8	50420/135	50420/135	60000.
22	91.4/ 90.8	50279/134	50279/134	60000.
24	91.4/ 90.7	49921/134	49921/134	59794.
26	91.2/ 90.5	49380/133	49380/133	58990.
28	91.0/ 90.3	48893/133	48893/133	58152.
30	90.8/ 90.1	48414/132	48414/132	57315.
32	90.6/ 89.9	47864/131	47864/131	56433.
34	90.3/ 89.6	47315/131	47315/131	55551.
36	90.1/ 89.2	46745/130	46745/130	54669.
38	89.7/ 88.9	46170/129	46170/129	53788.
40	89.4/ 88.5	45596/128	45596/128	52906.
45	88.6/ 87.6	44127/126	44127/126	50591.
49	87.9/ 87.0	42956/125	42956/125	48739.
HW	+LBS/KT	126	112	
TW	-LBS/KT	501	501	
APU	OFF+LBS	0	0	440
APR	OFF-LBS	1890	1990	3430
BLD	OPN-LBS	790	790	1330
CWL AI	ON-LBS	800	800	1030
WNG+CWL AI	-LBS	3030	3030	5770
ASKD INOP	-LBS	5750/29	5750/29	
SPLRS INP	-LBS	550	550	
ACCEL	HT (MSL)	800	800	

*** OBSERVE STRUCTURAL LIMITS ***

24JAN02

&a8L -- KEYW - EYW --

LANDING PERFORMANCE

-- KEYW - EYW

ELEVATION 3

CANADAIR REGIONAL JET
CF34-3B1 ENG

KEY WEST, FL
KEY WEST INTL

*** APPROACH CLIMB LIMITS - APPROACH FLAPS 8 ***

CLIMB PERFORMANCE NOT LIMITING BELOW 45 (C)

TEMP(C) -20 45 49

CLMB WT 55000. 55000. 54294.

CORRECTIONS: BLEED OPEN SUBTRACT 1543 POUNDS ABOVE 45. DEGREES C

COWL ANTIICE ON SUBTRACT 0 POUNDS ABOVE -20. DEGREES C

WING+COWL ANTIICE ON SUBTRACT 0 POUNDS ABOVE -20. DEGREES C

*** LANDING FIELD LENGTH LIMITS - LANDING FLAPS 45 ***

RUNWAY LENGTH WIND SLOPE KTS	ANTI-SKID SPLRS-OPER		OPERATIONAL SPLRS-INOP		ANTI-SKID SPLRS-OPER		INOPERATIVE SPLRS-INOP		LANDING FLAPS 0 DRY
	DRY	WET	DRY	WET	DRY	WET	DRY	WET	
-10	46659	38099	40776	NA	NA	NA	NA	NA	45366
09									
5801FT 0	55000	48830	51981	42866	NA	NA	NA	NA	55000
0.00									
10	55000	53031	55000	46636	NA	NA	NA	NA	55000
20	55000	55000	55000	50544	NA	NA	NA	NA	55000
CRT TW	-3	0	0	0	0	0	0	0	
SUB LB/KT	-1191	-1073	-1120	-995	NA	NA	NA	NA	
-10	46659	38099	40776	NA	NA	NA	NA	NA	45366
27									
5801FT 0	55000	48830	51981	42866	NA	NA	NA	NA	55000
0.00									
10	55000	53031	55000	46636	NA	NA	NA	NA	55000
20	55000	55000	55000	50544	NA	NA	NA	NA	55000
CRT TW	-3	0	0	0	0	0	0	0	
SUB LB/KT	-1191	-1073	-1120	-995	NA	NA	NA	NA	

24JAN02

&a8L -- KEYW - EYW --

TAKEOFF PERFORMANCE

-- KEYW - EYW

ELEVATION 3

CANADAIR RJ-700

KEY WEST, FL

* APU ON *

CF34-8C1 ENG

KEY WEST INTL

*** APR ARMED ***

TAKEOFF FLAPS 20.0 DEGREES

ENGINE BLEED CLOSED

RUNWAY		09	27	
LENGTH		5801	5801	CLIMB
SLOPE		0.00	0.00	LIMIT
TMP	N1-BLD			
DEG C	CLSD/OPEN		LIMIT WEIGHT / V1	
-20	82.9/ 82.5	72750/126	72750/126	75000.
-15	83.7/ 83.2	72750/126	72750/126	75000.
-10	84.5/ 84.0	72750/126	72750/126	75000.
-5	85.4/ 84.8	72750/126	72750/126	75000.
0	86.0/ 85.5	72750/126	72750/126	75000.
2	86.3/ 85.8	72750/126	72750/126	75000.
4	86.6/ 86.1	72750/126	72750/126	75000.
6	86.9/ 86.4	72750/126	72750/126	75000.
8	87.2/ 86.7	72750/126	72750/126	75000.
10	87.5/ 87.0	72750/126	72750/126	75000.
12	87.8/ 87.3	72750/126	72750/126	75000.
14	88.1/ 87.6	72750/126	72750/126	75000.
16	88.4/ 87.8	72750/126	72750/126	75000.
18	88.7/ 88.1	72750/126	72750/126	75000.
20	89.0/ 88.4	72750/126	72750/126	75000.
22	89.3/ 88.7	72750/126	72750/126	75000.
24	89.6/ 89.0	72750/126	72750/126	75000.
26	89.8/ 89.3	72750/126	72750/126	75000.
28	90.1/ 89.6	72750/126	72750/126	75000.
30	90.4/ 89.9	72750/126	72750/126	75000.
32	90.1/ 89.5	72260/126	72260/126	75000.
34	89.8/ 89.2	71309/126	71309/126	75000.
36	89.3/ 88.7	70302/125	70302/125	75000.
38	88.8/ 88.2	69245/124	69092/124	74639.
40	88.3/ 87.7	68180/123	67738/123	73007.
45	86.9/ 86.2	65253/121	64416/120	68819.
49	85.7/ 85.0	62974/120	61927/120	65424.
HW	+LBS/KT	161	62	
TW	-LBS/KT	629	629	
APU	OFF+LBS	0	160	510
BLD	OPN-LBS	870	1180	1500
CWL AI	ON-LBS	0	0	0
WNG+CWL	AI-LBS	0	390	0
ACCEL	HT(MSL)	800	800	

*** OBSERVE STRUCTURAL LIMITS ***

24JAN02